

### **Amendments to the Claims**

This listing of claims will replace all prior versions and listings of claims in the application.

#### **Listing of Claims**

1. (Currently Amended) A computer method for performing a seamless handoff of a mobile device from an initial access point to a target access point in a wireless local access network, comprising the steps of:

assigning session data at a roaming server to the initial access point to establish an initial connection from the mobile device through the initial access point to ~~[[a]]~~ the roaming server;

detecting at the roaming server a triggering event that initiates a seamless transfer of the mobile device from the initial access point to the target access point; and

seamlessly transferring at the roaming server assignment of the session data from the initial access point to the target access point to establish a target connection from the mobile device through the target access point to the roaming server based on the session data in response to the ~~step of detecting the triggering event has occurred~~, thereby enabling the mobile device to use the session data to communicate with the ~~target access point~~ roaming server in a continuous manner during the transfer, ~~such that the mobile device transfers seamlessly from the initial access point to the target access point.~~

2. (Original) The computer method of claim 1, wherein the step of detecting the triggering event comprises detecting that the mobile device is moving out of range of the initial access point and within range of the target access point.

3. (Original) The computer method of claim 1, wherein the step of detecting the triggering event comprises determining that the target access point has a preferable level of congestion compared to a level of congestion for the initial access point.

4. (Original) The computer method of claim 1, wherein the step of detecting the triggering

event comprises determining that the target connection has a preferable level of connection quality compared to a level of connection quality for the initial connection.

5. (Currently Amended) The computer method of claim 1, wherein:

the step of assigning the session data to the initial access point comprises assigning an access point device address to the initial access point; and

the step of transferring assignment of the session data comprises terminating the assignment ~~assigning~~ of the access point device address to the initial access point and assigning the access point device address to the target access point.

6. (Original) The computer method of claim 1, wherein:

the initial connection is a first version of a point to point link between the initial access point and the mobile device based on assigning the access point device address to the initial access point; and

the target connection is a second version of the point to point link based on assigning the access point device address to the target access point and re-establishing the point to point link between the target access point and the mobile device.

7. (Original) The computer method of claim 1, further comprising a step of registering the session data in a database.

8. (Original) The computer method of claim 1, wherein the session data comprises the access point device address and encryption data.

9. (Original) The computer method of claim 1, further comprising a step of assigning a mobile device address to the mobile device, and wherein the session data includes the access point device address and the mobile device address.

10. (Original) The computer method of claim 1, wherein the step of detecting the triggering event occurs in response to a transient situation affecting the initial access point; and further

comprising a step of reassigning the session data to the initial access point to re-establish the initial connection after a termination of the transient situation.

11. (Original) The computer method of claim 10, wherein the transient situation is one of a congestion of the initial access point and a decline of connection quality in the initial connection.

12. (Currently Amended) A system comprising a digital processor for performing a seamless handoff of a mobile device from an initial access point to a target access point in wireless a local access network, the system comprising:

a gateway application executing on a roaming server ~~the digital processor~~ for assigning session data to the initial access point to establish an initial connection from the mobile device through the initial access point to the [[a]] roaming server and seamlessly transferring assignment of the session data from the initial access point to the target access point to establish a target connection from the mobile device through the target access point to the roaming server based on the session data, thereby maintaining a continuous connection with the roaming server during the transfer; and

a communications interface coupled with the gateway application for detecting [[a]] the triggering event that initiates [[a]] the ~~transfer of the mobile device from the initial access point to the target access point; and the gateway application transferring assignment of the session data from the initial access point to the target access point to establish a target connection from the mobile device through the target access point to the roaming server based on the session data, enabling the mobile device to use the session data to communicate with the target access point, such that the mobile device transfers seamlessly from the initial access point to the target access point.~~

13. (Original) The system of claim 12, wherein the triggering event is based on roaming of the mobile device and wherein the communication interface detects that the mobile device is moving out of range of the initial access point and within range of the target access point.

14. (Original) The system of claim 12, wherein the triggering event is based on congestion in the

wireless area network and wherein the communications interface determines that the target access point has a preferable level of congestion compared to a level of congestion for the initial access point.

15. (Original) The system of claim 12, wherein the triggering event is based on connection quality and wherein the communications interface determines that the target connection has a preferable level of connection quality compared to a level of connection quality for the initial connection.

16. (Currently Amended) The system of claim 12, wherein the session data includes an access point device address and the gateway application:

assigns the session data to the initial access point by assigning ~~making an assignment of~~ the access point device address to the initial access point; and

transfers the session data by terminating the assignment of the access point device address to the initial access point and by assigning the access point device address to the target access point.

17. (Original) The system of claim 12, wherein:

the initial connection is a first version of a point to point link between the initial access point and the mobile device based on assigning the access point device address to the initial access point; and

the target connection is a second version of the point to point link based on assigning the access point device address to the target access point and re-establishing the point to point link between the target access point and the mobile device.

18. (Original) The system of claim 12, wherein the gateway application registers the session data in a database.

19. (Original) The system of claim 12, wherein the session data comprises the access point device address and encryption data.

20. (Original) The system of claim 12, wherein the gateway application assigns a mobile device address to the mobile device, and wherein the session data includes the access point device address and the mobile device address.

21. (Original) The system of claim 12, wherein the communication interface detects the triggering event occurs in response to a transient situation affecting the initial access point; and the gateway application reassigns the session data to the initial access point to re-establish the initial connection after a termination of the transient situation.

22. (Original) The system of claim 21, wherein the transient situation is one of a congestion of the initial access point and a decline of connection quality in the initial connection.

23. (Currently Amended) A computer program product that includes a computer usable medium having computer program instructions stored thereon for performing a seamless handoff of a mobile device from an initial access point to a target access point in a wireless local area network, such that the computer program instructions, when performed by a digital processor, cause the digital processor to:

assign session data to the initial access point to establish an initial connection from the mobile device through the initial access point to a roaming server;

detect a triggering event that initiates a seamless transfer of the mobile device from the initial access point to the target access point; and

transfer, at the roaming server, assignment of the session data from the initial access point to the target access point to establish a target connection from the mobile device through the target access point to the roaming server based on the session data in response to ~~the step of detecting~~ the triggering event ~~has occurred~~, thereby enabling the mobile device to use the session data to maintain a continuous connection with the roaming server during the transfer ~~communicate with the target access point, such that the mobile device transfers seamlessly from the initial access point to the target access point.~~

24. (Cancelled)

25. (Cancelled)

26. (Cancelled)

27. (Cancelled)

28. (Cancelled)

29. (Cancelled)

30. (Cancelled)

31. (Currently Amended) A method ~~in a roaming server~~ for enabling seamless roaming of mobile devices among access points in a wireless local area network, comprising the steps of:  
establishing a host controller interface in ~~the~~ a roaming server;  
encapsulating host controller commands in a packet-based network protocol for use in communication ~~with~~ between the roaming server and access points in the wireless area network, the host controller commands directed to a connection session of the mobile device with the wireless local area network; and  
exchanging the encapsulated host controller commands ~~with~~ between access points in the wireless area network to enable a mobile device to receive the host controller commands from the roaming server and continuously maintain the connection session with the roaming server while roaming among the access points.

32. (Original) The method of claim 31, wherein the step of encapsulating the host controller commands comprises encapsulating each host controller command in an encapsulated packet based on the packet-based network protocol, and providing a device address of a host exchanging each encapsulated packet, a sequence number for use in a series of encapsulated packets, and an

acknowledgment number for use in acknowledging a previously transmitted encapsulated packet.

33. (Original) The method of claim 31, wherein the packet-based network protocol is a user datagram protocol.

34. (Currently Amended) A roaming server comprising a digital processor for enabling seamless roaming of mobile devices among access points in a wireless area network, comprising:  
a host controller interface established in the roaming server;  
a packet encapsulation module executing on the digital processor for encapsulating host controller commands in a packet-based network protocol for use in communication between the roaming server and ~~with~~ access points in the wireless area network, the host controller commands directed to a connection session of the mobile device with the wireless local area network; and  
a communications interface coupled with the digital processor for exchanging the encapsulated host controller commands ~~with~~ between access points in the wireless area network to enable a mobile device to receive the host controller commands from the roaming server and continuously maintain the connection session with the roaming server while roaming among the access points.

35. (Original) The roaming server of claim 34, wherein the packet encapsulation module encapsulates each host controller command in an encapsulated packet based on the packet-based network protocol, and the packet encapsulation module provides a device address of a host exchanging each encapsulated packet, a sequence number for use in a series of encapsulated packets, and an acknowledgment number for use in acknowledging a previously transmitted encapsulated packet.

36. (Original) The roaming server of claim 34, wherein the packet-based network protocol is a user datagram protocol.

37. (Currently Amended) A computer program product that includes a computer usable medium having computer program instructions stored thereon for enabling seamless roaming of

mobile devices among access points in a wireless area network, such that the computer program instructions, when performed by a digital processor, cause the digital processor to:

establish a host controller interface in a roaming server;

encapsulate host controller commands in a packet-based network protocol for use in communication among the roaming server and ~~with~~ access points in the wireless area network, the host controller commands directed to a connection session of the mobile device with the wireless local area network; and

exchange the encapsulated host controller commands ~~with~~ between access points in the wireless area network to enable a mobile device to receive the host controller commands from the roaming server and continuously maintain the connection session with the roaming server while roaming among the access points.

38. (Cancelled)

39. (Cancelled)